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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,476	04/08/2004	Peter J. Hopper	100-18110 (P05269-D01)	8696
33402	7590	03/08/2005	EXAMINER	
LAW OFFICES OF MARK C. PICKERING P.O. BOX 300 PETALUMA, CA 94953			NGUYEN, TUAN H	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/820,476</p>	<p>Applicant(s)</p> <p align="center">HOPPER ET AL.</p>	
	<p>Examiner</p> <p align="center">Tuan H. Nguyen</p>	<p>Art Unit</p> <p align="center">2813</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-13 and 16-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7, 9, 11 and 13 is/are allowed.
- 6) ☒ Claim(s) 8, 10, 12, 16, 17, 19, 21-23, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 18, 20, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/04, 6/04, 10/04, 2/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 8, 10, 12, 21, 22, 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, line 11, should "first" be changed to -- second--, since the fourth opening is defined by the second conductive spacer.

Claims 21-22, "the conducting spacer" is confusing and indefinite, since the same name is used for different spacers, it is unclear which one, "the conductive spacer" refers to. First and second should be used to clearly identify the spacer.

Claim 23, line 3, "the layer of insulation material" should be changed to --the insulation region -- for consistency and providing proper antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Art Unit: 2813

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 16, 17, 19, 26, 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Wu et al. (U.S. Pat. No. 6,413,832).

See Wu et al., figs. 1-5 and related text on col. 3-4 which discloses the claimed method for forming a semiconductor device on an insulation region 14, 16, 20 having a top surface comprising the steps of forming a trench 24 in the insulation region (fig. 3); forming a layer of conductive material to fill up the trench and etching the layer of conductive material to remove the layer of conductive material from the top surface of the insulation region, and form an opening and a conductive spacer 32, 34 that contacts the side wall surface (fig. 4); further forming and etching a layer of isolation material to form a hole and an isolation spacer 42, 44 that contacts a side wall of the conductive spacer 32, 24 (fig. 4).

Allowable Subject Matter

Claims 7, 9, 11, 13 are allowed.

Claims 8, 10, 12, 21, 22, 23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 18, 20, 24, 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of the references of record teaches or suggests the claimed method for forming a semiconductor device including the step of forming a conductive region on the conductive spacer and the layer of isolation, the conductive region making an electrical connection with the conductive spacer.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kuo et al., Kapoor, and Meijer et al. are cited as of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is 571-272-1694. The examiner can normally be reached on 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

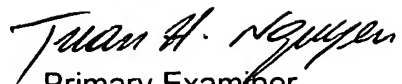
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan H. Nguyen

Application/Control Number: 10/820,476

Page 5

Art Unit: 2813


Primary Examiner
Art Unit 2813